



PATENT
Docket No. SPLX.P0081

CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 24, 2004.

Mani Adeli

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Steven Teig

Serial No.: 10/076,121

Filing Date: 2/12/2002

For: **METHOD AND APPARATUS FOR
GENERATING MULTI-LAYER ROUTES**

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 C.F.R. § 1.97**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to

03/29/2004 SSANDRA 0000000004 10076121.00 GP
01 FC:1806

the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

This Information Disclosure Statement is submitted after receipt of a first Office Action on the merits but before the Final Office Action. Accordingly, a fee is required. The requisite fee is attached.

However, in the unlikely event that the Patent Office determines that additional fees, extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-1128** referencing SPLX.P0081. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: March 24, 2004

Respectfully submitted,

By: _____

Marni Adeli
Registration No. 39,585

Stattler, Johansen & Adeli LLP
P.O. Box 51860
Palo Alto, CA 94303-0728

Phone No. (650) 752-0990 x102
Fax No. (650) 752-0995

Please type a plus sign (+) inside this box™



U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

<p style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i></p>				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	1	of	13	Attorney Docket Number	SPLX.P0081

U.S. PATENT DOCUMENTS

Examiner* Initials	Cite No. ¹	U.S. Patent Document Number		Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2002/0100 009	A1	07-25-2002	Xing et al.	
	2.	2002/0104 061	A1	08-01-2002	Xing et al.	
	3.	2002/0107 711	A1	08-08-2002	Xing et al.	
	4.	2002/0182 844	A1	12-05-2002	Igarashi et al.	
	5.	2003/0005 399	A1	01-02-2003	Igarashi et al.	
	6.	2003/0188 281	A1	10-02-2003	Xing	
	7.	4,615,011		09-30-1986	Linsker	
	8.	4,782,193		11-01-1988	Linsker	
	9.	5,633,479		05-27-1997	Hirano	
	10.	5,634,093		05-27-1997	Ashida et al.	
	11.	5,635,736		06-03-1997	Funaki et al.	
	12.	6,128,767		10-03-2000	Chapman	
	13.	6,219,823	B1	04-17-2001	Hama et al.	
	14.	6,226,560	B1	05-01-2001	Hama et al.	
	15.	6,262,487	B1	07-17-2001	Igarashi et al.	
	16.	6,295,634	B1	09-25-2001	Matsumoto	
	17.	6,436,804	B2	08-20-2002	Igarashi et al.	
	18.	6,490,713	B2	12-03-2002	Matsumoto	
	19.	6,546,540	B1	04-08-2003	Igarashi et al.	
	20.	6,645,842	B2	11-11-2003	Igarashi et al.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

O I P E
MAR 2 6 2004

Please type a plus sign (+) inside this box™



Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control numberINFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	2	of	13	Attorney Docket Number	SPLX.P0081

U.S. PATENT DOCUMENTS

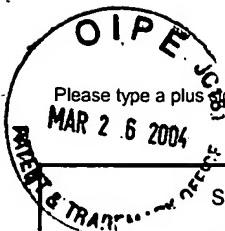
21.	2001/0003 843	A1	06-14-2001	Scepanovich et al.	
22.	2002/0174 413	A1	11-21-2002	Tanaka	
23.	2003/0025 205	A1	02-06-2003	Shively	
24.	2003/0121 017	A1	06-26-2003	Andreev et al.	
25.	4,673,966		06-16-1987	Shimoyama	
26.	4,700,016		10-13-1987	Hitchcock et al.	
27.	4,855,929		08-08-1989	Nakajima	
28.	5,360,948		11-01-1994	Thornberg	
29.	5,375,069		12-20-1994	Satoh et al.	
30.	5,532,934		07-02-1996	Rostoker	
31.	5,578,840		11-26-1996	Scepanovic et al.	
32.	5,618,744		04-08-1997	Suzuki et al.	
33.	5,636,125		06-03-1997	Rostoker et al.	
34.	5,637,920		06-10-1997	Loo	
35.	5,650,653		07-22-1997	Rostoker et al.	
36.	5,657,242		08-12-1997	Sekiyama et al.	
37.	5,659,484		08-19-1997	Bennett et al.	
38.	5,663,891		09-02-1997	Bamji et al.	
39.	5,717,600		02-10-1998	Ishizuka	
40.	5,723,908		03-03-1998	Fuchida et al.	
41.	5,742,086		04-21-1998	Rostoker et al.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Please type a plus sign (+) inside this box™



Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	3	of	13	Attorney Docket Number	SPLX.P0081

U.S. PATENT DOCUMENTS

42.	5,757,089		05-26-1998	Ishizuka	
43.	5,757,656		05-26-1998	Hershberger et al.	
44.	5,777,360		07-07-1998	Rostoker et al.	
45.	5,811,863		09-22-1998	Rostoker et al.	
46.	5,822,214		10-13-1998	Rostoker et al.	
47.	5,838,583		11-17-1998	Varadarajan et al.	
48.	5,859,449		01-12-1999	Kobayashi et al.	
49.	5,889,329		03-30-1999	Rostoker et al.	
50.	5,889,677		03-30-1999	Yasuda et al.	
51.	5,898,597		04-27-1999	Scepanovic et al.	
52.	5,914,887		06-22-1999	Scepanovic et al.	
53.	5,973,376		10-26-1999	Rostoker et al.	
54.	5,980,093		11-09-1999	Jones et al.	
55.	6,035,108		03-07-2000	Kikuchi	
56.	6,038,383		03-14-2000	Young et al.	
57.	6,058,254		05-02-2000	Scepanovic et al.	
58.	6,067,409		05-23-2000	Scepanovic et al.	
59.	6,068,662		05-30-2000	Scepanovic et al.	
60.	6,088,519		07-11-2000	Koford	
61.	6,111,756		08-29-2000	Moresco	
62.	6,123,736		09-26-2000	Pavsic et al.	
63.	6,155,725		12-05-2000	Scepanovic et al.	
64.	6,166,441		12-26-2000	Geryk	
65.	6,175,950	B1	01-16-2001	Scepanovic et al.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Please type a plus sign (+) inside this box™

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	4	of	13	Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
				Attorney Docket Number	SPLX.P0081

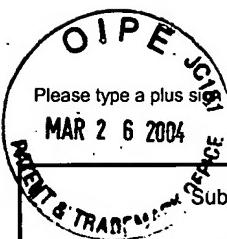
U.S. PATENT DOCUMENTS

66.	6,209,123	B1	03-27-2001	Maziasz et al.	
67.	6,216,252	B1	04-10-2001	Dangelo et al.	
68.	6,219,832	B1	04-17-2001	Buzbee	
69.	6,230,306	B1	05-08-2001	Raspopovic et al.	
70.	6,247,167	B1	06-12-2001	Raspopovic et al.	
71.	6,253,363	B1	06-26-2001	Gasanov et al.	
72.	6,260,179	B1	07-10-2001	Ohsawa et al.	
73.	6,289,495	B1	09-11-2001	Raspopovic et al.	
74.	6,301,686	B1	10-09-2001	Kikuchi et al.	
75.	6,320,391	B1	11-20-2001	Bui	
76.	6,324,674	B2	11-27-2001	Andreev et al.	
77.	6,324,675	B1	11-27-2001	Dutta et al.	
78.	6,327,693	B1	12-04-2001	Cheng et al.	
79.	6,327,694	B1	12-04-2001	Kanazawa	
80.	6,330,707	B1	12-11-2001	Shinomiya et al.	
81.	6,342,682	B1	01-29-2002	Mori et al.	
82.	6,365,958	B1	04-02-2002	Ibnabdeljalil et al.	
83.	6,378,121	B2	04-23-2002	Hiraga	
84.	6,385,758	B1	05-07-2002	Kikuchi et al.	
85.	6,401,234	B1	06-04-2002	Alpert et al.	
86.	6,405,358	B1	06-11-2002	Nuber	
87.	6,407,434	B1	06-18-2002	Rostoker et al.	
88.	6,412,097	B1	06-25-2002	Kikuchi et al.	
89.	6,412,102	B1	06-25-2002	Andreev et al.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Please type a plus sign (+) inside this box™ +

MAR 26 2004

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	5	of	13	Attorney Docket Number	SPLX.P0081

U.S. PATENT DOCUMENTS

	90.	6,463,575	B1	10-08-2002	Takahashi	
	91.	6,473,891	B1	10-29-2002	Shively	
	92.	6,512,292	B1	01-28-2003	Armburst et al.	
	93.	6,519,751	B2	02-11-2003	Sriram et al.	
	94.	6,526,555	B1	02-25-2003	Teig et al.	
	95.	6,543,043	B1	04-01-2003	Wang et al.	
	96.	6,557,145	B2	04-29-2003	Boyle et al.	
	97.	6,567,967	B2	05-20-2003	Greidinger et al.	
	98.	6,586,281	B1	07-01-2003	Gabara et al.	
	99.	6,615,400	B1	09-02-2003	Lukanc	

FOREIGN PATENT DOCUMENTS

Examiner* Initials	Cite No. ¹	Foreign Patent Document		Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴				
	100.	JP	11-296560	10-29-1999	Matsumoto et al.	with English translation of Abstract;	
	101.	JP	2000-082743	A	03-21-2000	Igarashi et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application. ✓
	102.	JP	64-15947		01-19-1989	Ouchi	with English translation of Abstract;
	103.	JP	03-173471		07-26-1991	Tawada et al.	with Japanese Patent Office's English translation of Abstract; and with English ✓

Examiner Signature	Date Considered
-----------------------	--------------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

O I P E
J C H

Please type a plus sign (+) inside this box™



MAR 26 2004

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

<p>Substitute for form 1449A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	6	of	13	Attorney Docket Number	SPLX.P0081

FOREIGN PATENT DOCUMENTS

						translation of the application.	
104.	JP	04-000677		01-06-1992	Fujiwara et al.	with English translation of Abstract;	
105.	JP	05-102305		04-23-1993	Sato	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
106.	JP	05-243379		09-21-1993	Kubota	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
107.	JP	07-86407		03-31-1995	Miura	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
108.	JP	09-162279		06-20-1997	Yoshida	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

O I P E S

Please type a plus sign (+) inside this box™



MAR 26 2004

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Application Number

10/076,121

Filing Date

2/12/02

First Named Inventor

Steven Teig

Group Art Unit

Do, Thuan

Examiner Name

2825

Sheet

7

of

13

Attorney Docket Number

SPLX.P0081

NON PATENT LITERATURE DOCUMENTS

Examiner* Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁸
	109.	Chen, H.F. et al., A Faster Algorithm for Rubber-Band Equivalent Transformation for Planar VLSI Layouts, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 15, No. 2, February 1996, pp. 217-227.	
	110.	Chip Model with Wiring Cost Map, August 1983, IBM Technical Disclosure Bulletin, vol. 26, issu. 3A, pp. 929-933	
	111.	Dayan, T. et al., Layer Assignment for Rubber Band Routing, UCSC-CRI-93-04, January 20, 1993.	
	112.	Dayan, T., Rubber-Band Based Topological Router, A Dissertation, UC Santa Cruz, June 1997.	
	113.	Dood, P. et al. A Two-Dimensional Topological Compactor with Octagonal Geometry, 28 th ACM/IEEE Design Automation Conference, pp 727-731, July 1991.	
	114.	Fujimura, K. et al, Homotopic Shape Deformation.	
	115.	Hama, T. et al., Curvilinear Detailed Routing Algorithm and its Extension to Wire-Spreading and Wire-Fattening.	
	116.	Hama, T. et al., Topological Routing Path Search Algorithm with Incremental Routability Test, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 18, No. 2, February 1999, pp. 142-150.	
	117.	Kobayashi, K. et al., A New Interactive Analog Layout Methodology based on Rubber-Band Routing, UCSC-CRL-96-12, June 13, 1996.	
	118.	Lim, A. et al, A Fast Algorithm To Test Planar Topological Routability, Technical Report 94-012, pp. 1-16.	
	119.	Lu, Y., Dynamic Constrained Delaunay Triangulation and Application to Multichip Module Layout, A Thesis for Master of Science, UC Santa Cruz, December 1991.	
	120.	Maley, F.M., Testing Homotopic Routability Under Polygonal Wiring Rules, Algorithmica 1996, 15: 1-16.	
	121.	Morton, P. B. et al., An Efficient Sequential Quadratic Programming Formulation of Optimal Wire Spacing for Cross-Talk Noise Avoidance Routing, UCSC-CRL-99-05, March 10, 1999.	
	122.	NN71091316, Use of Relatively Diagonal And Rectangular Wiring Planes n Multilayer Packages, September 1971, IBM Technical Disclosure Bulletin, Vol. No. 14, Issue No. 4, pp. 1316-1317.	

Examiner Signature	Date Considered
-----------------------	--------------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Please type a plus sign (+) inside this box™



MAR 26 2004

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	8	of	13	Attorney Docket Number	SPLX.P0081

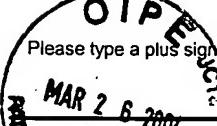
NON PATENT LITERATURE DOCUMENTS

123.	Staepelaere, D. et al., Geometric Transformations for a Rubber-Band Sketch, A Thesis for a Master of Science in Computer Engineering, UCSC, September 1992.	
124.	Staepelaere, D. et al., Surf: A Rubber-Band Routing System for Multichip Modules, pp 18-26, 1993.	
125.	Su, J. et al., Post-Route Optimization for Improved Yield Using Rubber-Band Wiring Model, 1997 International Conference on Computer-Aided Design, pp 700-706, November 1997.	
126.	Wei-Ming Dai, W. et al., Routability of a Rubber-Band Sketch. 28 th ACM-IEEE Design Automation Conference, 1991. pp. 45-65.	
127.	Xing, Z. et al., A Minimum Cost Path Search Algorithm Through Tile Obstacles, slide presentation.	
128.	Xing, Z. et al., Shortest Path Search Using Tiles and Piecewise Linear Cost Propagation, IEEE, 2002, pp.145-158.	
129.	Xu, A More Efficient Distance Vector Routing Algorithm, UCSC-CRL-96-18, March 1997.	
130.	Yu, M.-F. et al., Fast and Incremental Routability Check of a Topological Routing Using a Cut-Based Encoding, UCSC-CRL-97-07, April 14, 1997.	
131.	Yu, M.-F. et al, Interchangeable Pin Routing with Application to Package Layout, UCSC-CRL-96-10, April 25, 1996.	
132.	Yu, M.-F. et al., Pin Assignment and Routing on a Single-Layer Pin Grid Array, UCSC-CRL-95-15, February 24, 1995.	
133.	Yu, M.-F. et al., Planar Interchangeable 2-Terminal Routing, UCSC-CRL-95-49, October 19, 1995.	
134.	Yu, M.-F. et al., Single-Layer Fanout Routing and Routability Analysis for Ball Grid Arrays, UCSC-CRL-95-18, April 25, 1995.	
135.	Ahuja, R. et al., Faster Algorithms for the Shortest Path Problem, Journal of the Association for Computing Machinery, vol. 37, No. 2, April 1990, pp. 213-223.	
136.	Alexander, M. et al., Performance-Oriented Placement and Routing for field-programmable gate arrays, Proceedings of the European Design Automation Conference, pages 80-85, 1995.	
137.	Alexander, M. et al., Placement and Routing for Performance-Oriented FPGA Layout, VLSI Design, Vol. 7, No. 1, 1998.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Please type a plus sign (+) inside this box™



Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	9	of	13	Attorney Docket Number	SPLX.P0081

NON PATENT LITERATURE DOCUMENTS

138.	Andou, H. et al., Automatic Routing Algorithm for VLSI, 22 nd Design Automation Conference, 1985, pp. 785-788.
139.	Bagga, J. et al., Internal, External, and Mixed Visibility Edges of Polygons.
140.	Berger, B. et al., Nearly Optimal Algorithms and Bounds for Multilayer Channel Routing, Journal of the Association for Computing Machinery, pp. 500-542, March 1995.
141.	Brady, L. et al., Channel Routing on a 60° Grid, extended abstract, pp.926-931.
142.	Carothers, K., A Method of Measuring Nets Routability for MCM's General Area Routing Problems, 1999, pp. 186-192.
143.	Chen, D-S. et al., A Wire-Length Minimization Algorithm for Single-Layer Layouts
144.	Chen et al., Optimal Algorithms for Bubble Sort Based Non-Manhattan Channel Routing, May 1994, Computer-Aided Design of Integrated Circuits and Systems, IEEE Transactions Volume: 13 Issues, pp. 603-609.
145.	Chen, H., Routing L-Shaped Channels in Nonslicing-Structure Placement. 24 th ACM-IEEE Design Automation Conference, pp. 152-165, 1987.
146.	Chen, H. et al., Physical Planning of On-Chip Interconnect Architectures, 2002, IEEE, International Conference, pp. 30-35
147.	Chen, S.-S. et al., A New Approach to the Ball Grid Array Package Routing, IEICE Trans. Fundamentals, Vol. E82-A, No. 11, November, 1999, pp. 2599-2608.
148.	Cheng, K. et al., Manhattan or Non Manhattan? A Study of Alternative VLSI Routing Architectures, pp 47-52, 2000.
149.	Cheng, K., Steiner Problem in Octilinear Routing Model, A Thesis submitted for the Degree of Master of Science, National University Singapore, 1995, pp. 1-122.
150.	Chiang, C. et al., Wirability of Knock-Knee Layouts with 45° Wires, IEEE Transactions on Circuits and Systems, Vol. 38, Issue 6, pp 613-624, June 1991.
151.	Cong, J. et al., Efficient Heuristics for the Minimum Shortest Path Steiner Arborescence Problem with Applications to VLSI Physical Design, Cadence Design Systems, pp.88-95.
152.	Cong, J. et al., Multilevel Approach to Full Chip Gridless Routing, 11/2001, IEEE, pp. 396-403.

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box™



MAR 2 6 2004

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO
**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet	10	of	13	Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
				Attorney Docket Number	SPLX.P0081

NON PATENT LITERATURE DOCUMENTS

153.	Cong, J. et al., Performance Driven Multi-Layer General Routing for PCB/MCM Designs, UCLA Computer Science Department, 1998, pp. 356-361.	
154.	Das, S. et al., Channel Routing in Manhattan-Diagonal Model, 9 th International Conference on VLSI Design, January 1996. pp. 43-48.	
155.	Das, S. et al., Routing of L-Shaped Channels, Switchboxes and Staircases in Manhattan-Diagonal Model, pp. 65-70, January 1998.	
156.	Enbody, R. et al., Near-Optimal n -Layer Channel Routing, 23 rd Design Automation Conference, 1986, pp. 708-714.	
157.	Finch, A.C. et al., A Method for Gridless Routing of Printed Circuit Boards, 22 nd Design Automation Conference, 1985 ACM, pp. 509-515.	
158.	Gao, S. et al., Channel Routing of Multiterminal Nets, Journal of the Association for Computing Machinery, Vol. 41, No. 4, July 1994, pp. 791-818.	
159.	Gao, T. et al., Minimum Crosstalk Channel Routing, pp. 692-696, 1993 IEEE.	
160.	Gao, T. et al., Minimum Crosstalk Switchbox Routing, pp. 610-615, 1994 ACM	
161.	Gonzalez, T. et al., A Linear Time-Algorithm for Optimal Routing, Journal of the Association for Computing Machinery, vol. 35, No. 4, October 1988, pp.810-831.	
162.	Guibas, L. et al., Optimal Shortest Path Queries in a Simple Polygon, 1987 ACM, pp.50-63.	
163.	Hachtel, G.D. et al., Linear Complexity Algorithms for Hierarchical Routing, 1/89, IEEE pp 64-80	
164.	Hershberger, J., Efficient Breakout Routing in Printed Circuit Boards, Computational Geometry, 1997, ACM, pp. 460-462.	
165.	Hershberger, J., Finding the Visibility Graph of a Simple Polygon in Time Proportional to its Size, Preliminary Version, 1987 ACM, pp. 11-20.	
166.	Hightower, D., A Solution to Line-Routing Problems on the Continuous Plane, Bell Laboratories, Inc., pp. 11-34.	
167.	Iso, N. et al., Efficient Routability Checking for Global Wires in Planar Layouts, IEICE Trans. Fundamentals, Vol.E80-A, No. 10 October 1997, pp. 1878-1882.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

O P E S C

Please type a plus sign (+) inside this box™



MAR 26 2004

Based on PTO/SB/08 a & b (05-03)
Approved for use through 05/31/2003. OMB 0651-0031U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet	11	of	13	Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
				Attorney Docket Number	SPLX.P0081

NON PATENT LITERATURE DOCUMENTS

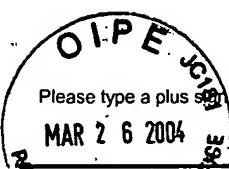
168.	Khoo, K. et al., An Efficient Multilayer MCM Router Based on Four-Via Routing, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 590-595.	
169.	Ladage, L. et al., Resistance Extraction Using a Routing Algorithm, 30 th ACM/IEEE Design Automation Conference, 1993, pp. 38-42.	
170.	Leach, G., Improving Worst-case Optimal Delaunay Triangulation Algorithms. Department of Computer Science, June 15, 1992, pp. 1-7.	
171.	Leiserson, C. et al., Algorithms for Routing and Testing Routability of Planar VLSI Layouts, pp. 69-78, May 1985.	
172.	Lillis, J. et al., New Performance Driven Routing Techniques With Explicit Area/Delay Tradeoff and Simultaneous Wire Sizing, 33 rd Design Automation Conference, 1996.	
173.	Lipski, W. et al., A Unified Approach to Layout Wirability, Mathematical Systems Theory, 1987, pp. 189-203.	
174.	Lodi, E. et al., A 2d Channel Router for the Diagonal Model, pp. 111-125, April 1991.	
175.	Lodi, E. et al., A Preliminary Study of a Diagonal Channel-Routing Model, Algorithmica, 1989, pp.585-597.	
176.	Lodi, E. et al., Lecture Notes in Computer Science, A 4d Channel router for a two layer diagonal model, pp. 464-476, July 1988.	
177.	Lodi, E. et al., Routing in Times Square Mode, pp. 41-48, June 1990	
178.	Lodi, E. et al., Routing Multiterminal Nets in a Diagonal Model, pp. 899-902, 1988.	
179.	Murooka, T. et al., Simplified Routing Procedure for a CAD-Verified FPGA, IEICE Trans. Fundamentals, Vol. E82-A, No. 11 November 1999, pp. 2440-2447.	
180.	Naclerio, N. et al., Via Minimization for Gridless Layouts, 24 th ACM/IEEE Design Automation Conference, 1987, pp.159-165.	
181.	Nam, G. et al, Satisfiability-Based Layout Revisited: Detailed Routing of Complex FPGAs Via Search-Based Boolean SAT, 1999, pp. 167-175.	
182.	Nestor, J. A New Look at Hardware Maze Routing, Proceedings of the 12 th ACM Symposium on Great Lakes Symposium on VLSI, pp 142-147, April 2002.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Please type a plus sign (+) inside this box™



MAR 26 2004

Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	12	of	13	Attorney Docket Number	SPLX.P0081

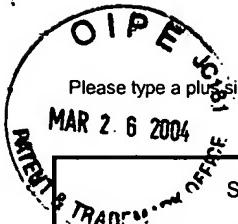
NON PATENT LITERATURE DOCUMENTS

183.	Ng, C., A "Gridless" Variable-Width Channel Router for Macro Cell Design, 24 th ACM/IEEE Design Automation Conference, 1987, pp. 633-636.
184.	Olaverri, A.G. et al., On the Minimum Size of Visibility Graphs.
185.	Overtone, G., EDA Underwriter 2 Finding Space in a Multi-Layer Board, Electronic Engineering, Morgan-Grampian LTD, vol. 67, no. 819, pp 29-30.
186.	Pocchiola, M., Computing the Visibility Graph via Pseudo-Triangulations, 11 th Computational Geometry, Vancouver, Canada, 1995 ACM, pp. 248-257.
187.	Powers, K. et al., The 60° Grid: Routing Channels in Width d/square root 3, VLSI, 1991, Proceedings., First Great Lakes Symposium on Kalamazoo, MI, USA, pp 214-291, March 1991.
188.	Royle, J. et al., Geometric Compaction in One Dimension for Channel Routing, 24 th ACM/IEEE Design Automation Conference, 1987, pp 140-145.
189.	Schiele, W. et al., A Gridless Router for Industrial Design Rule, 27 th ACM-IEEE Design Automation Conference, pp. 626-631, 1990.
190.	Sekiyama, Y. et al., Timing-Oriented Routers for PCB Layout Design of High-Performance Computers, International Conference on Computer Aided Design, pp 332-335, November 1991.
191.	Soukup, J. et al., Maze Router Without a Grid Map, IEEE, 1992, pp. 382-385.
192.	Takashima, Y. et al, Routability of FPGAs with Extremal Switch-Block Structures, IEICE Trans. Fundamentals, vol. E81-A, No. 5, May 1998, pp. 850-856.
193.	Teig, S. The X Architecture: Not your Father's Diagonal Wiring, International Workshop on System Level Interconnect Prediction, pp. 33-37, April 2002.
194.	Thakur, S. et al., Algorithms for a Switch Module Routing Problem, 1994, pp. 265-270.
195.	Theune, D. et al., HERO: Hierarchical EMC-constrained routing, 11/1992, IEEE pp 468-472.
196.	Tollis, I. Techniques for Wiring in Non-Square Grids, pp. 66-69, May 1989.
197.	Urrutia, J., On the Number of Internal and External Visibility Edges of Polygons, Department of CS, University of Ottawa, ON, Canada, February 11, 1997.

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Please type a plus sign (+) inside this box™



Based on PTO/SB/08 a & b (05-03)

Approved for use through 05/31/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of
information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Application Number	10/076,121
				Filing Date	2/12/02
				First Named Inventor	Steven Teig
				Group Art Unit	Do, Thuan
				Examiner Name	2825
Sheet	13	of	13	Attorney Docket Number	SPLX.P0081

NON PATENT LITERATURE DOCUMENTS

198.	Wang, D., Novel Routing Schemes for IC Layout, Part I: Two-Layer Channel Routing, 28 th ACM/IEEE Automation Conference, 1991, pp.49-53.	
199.	Yan et al., Three-Layer Bubble-Sorting -Based Non-Manhattan Channel Routing, ACM Transactions on Design Automation of Electronic Systems, Vol. 5, No. 3, July 2000, pp.726-734.	
200.	Zhou, H. et al., An Optimal Algorithm for River Routing with Crosstalk Constraints, 1996	
201.	Zhou, H. et al., Optimal River Routing with Crosstalk Constraints, ACM Transactions on Design Automation of Electronic Systems, vol. 3, No. 3, July 1998, pp. 496-514.	

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Please type a plus sign (+) inside this box™

+

Based on PTO/SB/21-05-03

Approved for use through 04/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

2825
CC

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	10/076,121
		Filing Date	2/12/02
		First Named Inventor	Steven Teig
		Group Art Unit	2825
		Examiner Name	Do, Thuan
Total Number of Pages in This Submission		Attorney Docket Number	SPLX.P0081

Enclosures (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Assignment Papers (for an application)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> Appeal Communication to Board of Appeals and interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declarations(s)	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosures (Listed below): Postcard Form 1449 201 cited references Credit Card Payment Form
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Certified Copy of Priority Documents	<input type="checkbox"/> CD, Number of CD(s)_____	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks:

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Or Individual name	Mani Adeli, Reg. No. 39,535 of Stattler Johansen & Adeli LLP
Signature	
Date	March 24, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Services as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date: 3/24/04

Typed or printed name	Mani Adeli
Signature	
Date	March 24, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.